New Features in System 5

Version 6

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Chapter 1: Introduction

System 5 version 6.0 software provides the following new features:

Dolby® Atmos™

- Supports 9.1-channel busses
- Records and plays back object metadata

EUCON Integration

- Improved method for setting the Automation mode from a strip
- Automation mode displays on the TFT
- Pro Tools VCAs can spill across multiple strips
- Euconized PEC/DIR panel enables tracks to be assigned directly from the panel
- Euconized CM401 Transport and Automation keys

New System 5 Mixer Models

- 96 Control Group and Multi format Masters
- 128 Busses

System Requirements and Compatibility

Avid can only assure compatibility and provide support for hardware and software it has tested and approved.

Pro Tools 11.2 is required to spill VCA channels in System 5.

For complete system requirements and a list of qualified computers, operating systems, hard drives, and third-party devices, visit:
www.avid.com/compatibility

About This Guide

This guide provides a basic overview of System 5 features and functionality.

For complete instructions on connecting and configuring your system, see the *System 5 Installation Guide*.

Conventions Used in This Guide

All of our guides use the following conventions to indicate menu choices and key commands:

Convention	Action
File > Save	Choose Save from the File menu
Control+N	Hold down the Control key and press the N key
Control-click	Hold down the Control key and click the mouse button
Right-click	Click with the right mouse button

The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:

User Tips are helpful hints for getting the most from your system.

Important Notices include information that could affect your data or the performance of your system.

Shortcuts show you useful keyboard or mouse shortcuts.

Cross References point to related sections in this guide and other Avid guides.

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News and Events Get the latest news from Avid or sign up for a demo.

Chapter 2: Dolby Atmos with System 5

These instructions assume the following:

- A Pro Tools version 11.2 workstation is used as the Dolby Atmos recorder.
- The Dolby Atmos recorder's inputs come from System 5 and its outputs go directly to the RMU.
  These comprise of a 9.1 bed and up to 118 objects. A second Pro Tools workstation can be used to record stems from the normal System 5 busses.
- Monitoring is accomplished via the Pro Tools Atmos recorder and the RMU.
  In Pro Tools, Input monitor is set to PEC mode enable monitoring via System 5's PEC/DIR panel.
- The Dolby Atmos 9.1 bus is always enabled, and there is an eMix option to add Metadata/RMU support.
  Once enabled, the System 5 monitor controls (Vol/Mute/Dim and fold down) are sent to the RMU. If Digital monitoring is enabled, this is now automatically disabled so the monitor bus is free to use as the 9.1 bed if desired. This allows you to use System 5's PEC/DIR for normal bus operations.

The Digital monitoring option is now an eMix, not a registry, preference.

To enable metadata control, you must assign two MADI ports in eMix to connect to the Pro Tools Atmos recorder/RMU. The default is the last 2 ports.

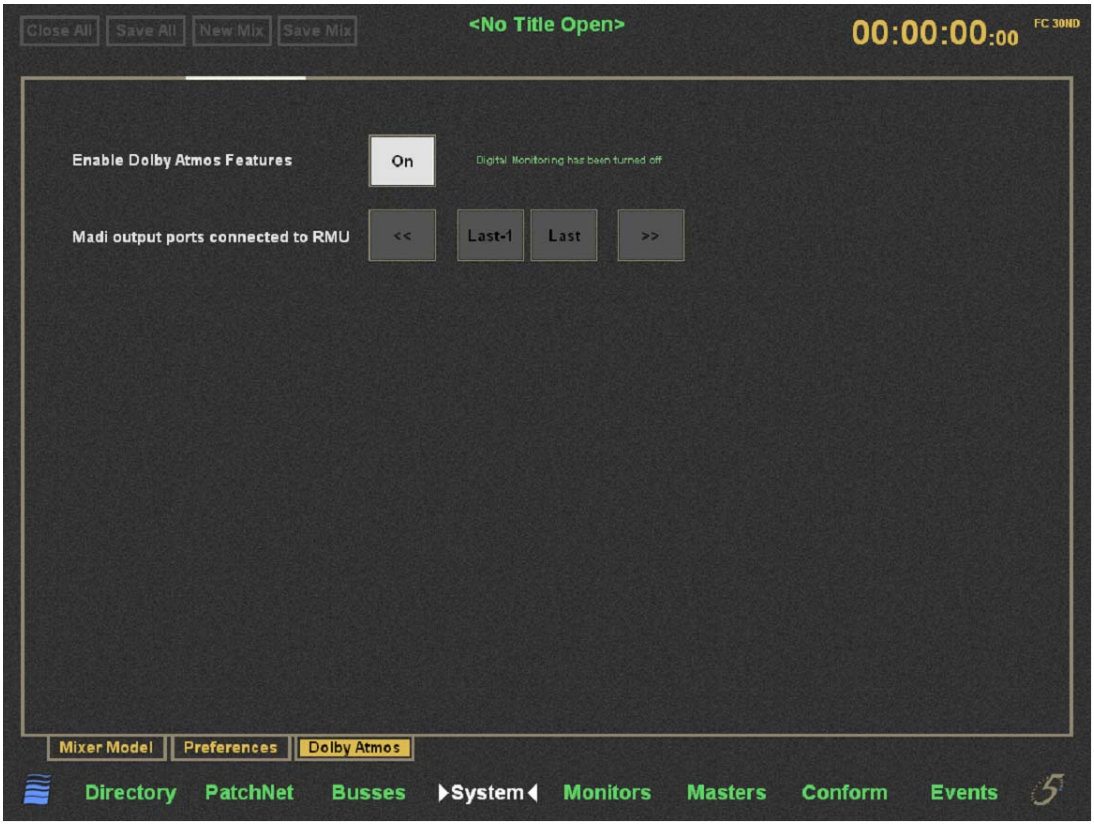
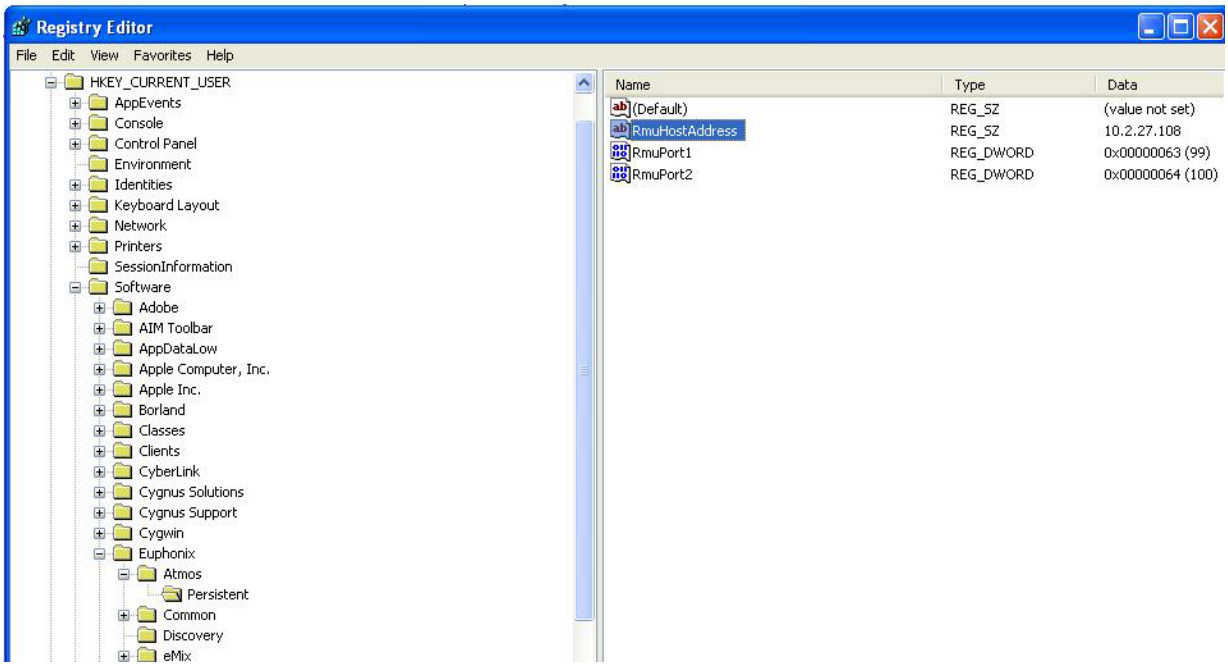


Figure 1. Enabling Dolby Atmos Features and assigning MADI ports in eMix

Registry

The new Atmos Pilot (Atmos.exe in the C:/eMix directory) communicates with the RMU. When eMix starts, it automatically starts up the Atmos pilot, which will try to connect to an RMU specified by a registry IP address. The path to this entry is: HKEY_CURRENT_USER/Software/Euphonix/Atmos.



Registry editor displays RMU's IP address

Monitor Control

The CM401 Main Monitor Level, Dim, and Cut will control the RMU in parallel to the ML524 (not used). Pressing the **Mon D Source** switch on the CM401 displays the RMU meters on the lower section of the CM401 TFT.

Atmos Object Control and Routing

In eMix, note that the MADI channel names on the two MADI outputs designated as Atmos MADI ports (see Figure 1) are labeled *AT1* through *AT118*. Also note that the first 10 outputs on the first port are not labeled because are for the 9.1-channel bed. The correct signal order for these is: L-R-C-LF-LSS-RSS-LRS-RRS-LTS-RTS.

To route a System 5 channel's panning metadata to the RMU:

- Patch the channel's direct output to one of the designated Atmos MADI outputs named *ATnnn*.

  If you want channel 1 on System 5 to control Atmos object 1, patch its direct output to RMU port 1, channel 11 (the first 10 are reserved for the 9.1 bed). It will be labeled AT1 in eMix. After patching, the System 5 channel label on the strip turns dark red and shows the object number instead of the channel default label (i.e., *AT1*).

Now when you pan that channel, its pan parameters are sent to the RMU. You can also route this channel to a normal System 5 bus/stem and the panning will follow.

Summing Atmos Objects

To sum multiple channels to one object, route them to a System 5 mono bus. Do not route these channels to any other busses. Route the selected bus output to the desired object channel that goes to the Pro Tools Recorder RMU. System 5 automatically puts the Object panner onto all of the original source channels. If necessary, you can route the Object output channel to other busses/stems.

When soloing a source channel, the system automatically unmutes the Object channel they are feeding. Similarly, soloing an Object Channel unmutes any channels bussed to it.

Recording Atmos Metadata from Pro Tools

If you have a Pro Tools session with Dolby Atmos Panner plug-in automation, you can transfer all the panner metadata to System 5.

To transfer panner metadata to System 5:

1. Open a Pro Tools session with Dolby Atmos Panner automation.
2. Make sure Pro Tools is controlled via System 5 serial machine control and properly synchronized.
3. On System 5, make sure your Atmos channels (up to 118) direct outputs are patched to the correct Atmos MADI outputs to the Pro Tools Recorder/RMU.
4. Set the Pro Tools Atmos Object plug-ins to Player mode.
5. On the CM401, select Atmos/Record mode.
   Note that the Pan balls for the Atmos object channels turn red.
6. Enable Mix on the CM401.
7. Set all System 5 Atmos channel Panners to Write Abs automation mode.
   You can set the Automation mode by holding down the channel's Wave key and pressing the Fader **Sel** switch until Write Abs displays on the TFT.
8. Punch in all your System 5 Atmos channel Panners.
9. Press **Play**.
   System 5 records the Panner's metadata in real time.
10. Once you have recorded all the metadata, Ctr-Alt-click any Pro Tools Panner plug-in to disable them all.
    This prevents Pro Tools from subsequently sending metadata to the RMU and fighting for control with System 5.
11. On the CM401, deselect Atmos Record mode.
    Note the Panner balls turn from red back to yellow.
12. Locate to the start of the Pro Tools session and press **Play**.
    System 5 should now be controlling the RMU object panning. You can confirm this using the Dolby RMU monitoring app; you should see all the pan balls moving around in the 3D view.

Know Problems

- The RMU defaults to LTC mode upon startup. You must deselect LTC mode to enable object control.

Dolby Atmos Knobset Controls

The following Dolby Atmos controls appear on the System 5 knobset.

Speaker Snap On/Off

Speaker Zones

Elevation mode

Size

Elevation On/Off

Surround Panner

Front Left/Right Panner

Dolby Atmos controls on the System 5 knobset

Chapter 3: New EUCON Functionality in System 5

PEC/DIR Control for EUCON Tracks

The PEC/DIR panel can now accept direct assignments for all track types. These can be System 5 Busses/Stems or EUCON tracks. This process is the same as assigning tracks to the surface.

To assign a track from the PEC/DIR panel:

- Select the track, bus, EUCON channel, or VCA on the CM401 panel and press the desired select switch on the CM403.

For Dolby Atmos monitoring and recording, group record tracks with VCAs and assign them to the CM403. Spilling VCAs on the CM403 is similar to spilling busses.

Spilling Pro Tools VCAs

Spilling a Pro Tools VCA on System 5 works exactly like spilling an S6 Master and Control Group.

To spill a Pro Tools VCA on System 5:

- Press the channel select keys to spill and un-spill.
  Pro Tools version 11.2 is required for this feature.

Pro Tools Select is now on the Func Sel key

Automation Mode and Trim Select and Display

- Holding down the Wave key and pressing the Fader **Sel** switch cycles through the automation modes on the TFT.
- Holding down the Wave key and pressing the **Mute** switch toggles Trim on and off.

The automation mode and Trim status are displayed on the lower half of the TFT.

EUCON Soft Keys for CM401 Automation and Transport

The Master Automation and Transport sections (outlined in red and blue, respectively, in Figure 2) can now send EUCON commands to attached DAWs. You can send the automation data to one DAW and transport data to others. The commands are stored in the Hybrid's normal Soft Key App Set in an .xml file in folders labeled *CM401 Automation* and *CM401 Transport*. A default Pro Tools App Set has been created, but it can be manually edited to suit the user's preferences. Although only one DAW or System 5 can be controlled at a time, it is quick and easy to toggle the focus between them.

To control a DAW from the CM401's Automation keys:

- Press the key to the right of the attached DAW in the lower garage (outlined in green in Figure 2).

To control a DAW's transport functions:

- In the lower garage (outlined in green in Figure 2), hold down the left key then press the right key of the DAW to which you want to send transport commands.

  A T appears next to the DAW with transport control; System 5's transport controls will not work.

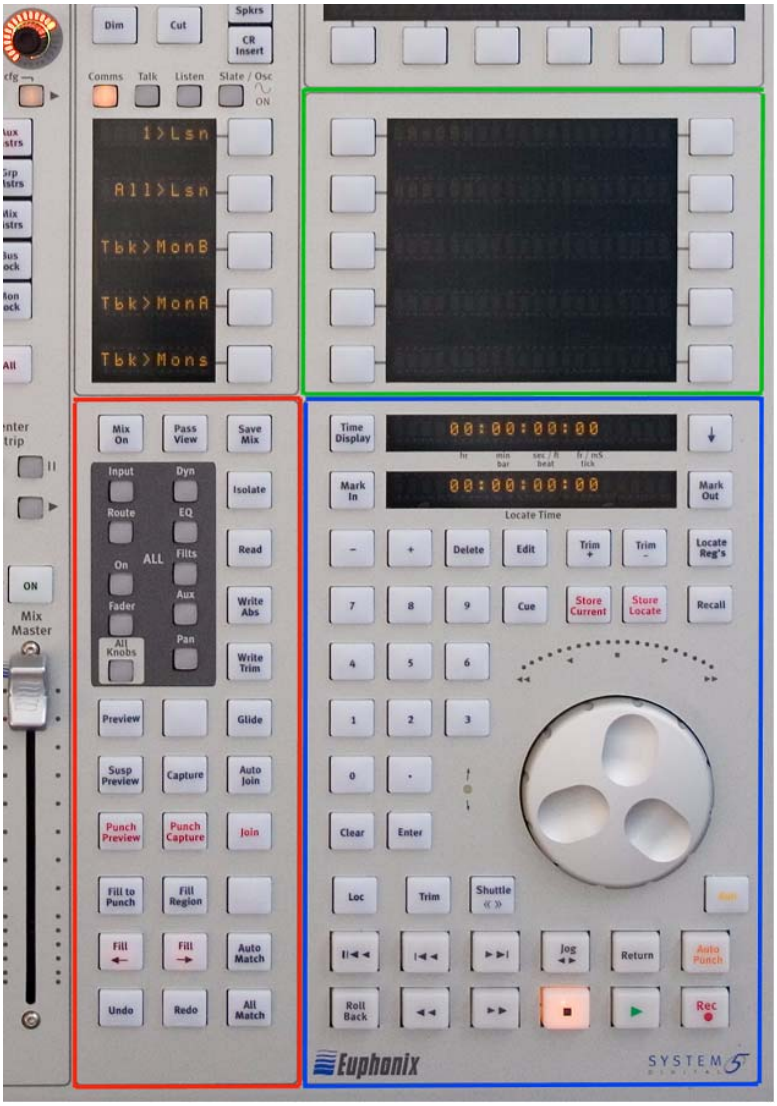


Figure 2. CM401 Soft Keys

Notes

- **All Match** sends a Pro Tools Auto Match command to all connected Pro Tools DAWs and **All Match** to System 5 at the same time.
- **Save Mix** sends a **Save** command to all connected Pro Tools DAWs and System 5 at the same time.
- Pressing the **Auto Match** switch does nothing when Pro Tools is selected.
- The **All knobs** switch performs the same function as the Pro Tools Do to All setting.
- The **Faders** switches perform the same function as the Pro Tools Do to Selected setting.
- **Jog/Shuttle** works on the DAW selected in the lower garage. To apply Jog/Shuttle functions to System 5, deselect the DAW in the lower garage.

Avid
2001 Junipero Serra Boulevard
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